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ASSOCIATION FOR LEARNING ENVIRONMENTS

Enhancing the Educational Experience

Safe, Secure, and Supportive Schools: Creating learning environments that address the well-being of students and staff

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- 8-week certificate course
- Certificate issued by A4LE
- Accredited by the International CPTED Association
- Eligible for AIA CEU's, including Health, Safety, and Welfare credits.
- Completely on-line, with no "real-time" commitments
- Fully accessible 24/7 with internet connection
- 6-10 hours per week commitment
- Delivered through San Diego State University, Interwork Foundation
- Delivery: April 20, 2020-June 12, 2020

Instructional Team

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School Safety/Security: A Big Hairy Problem

Video Games

Stranger Danger

Lack of Supervision

No Door Locks, Cameras

No Self Defense Training

Bullying

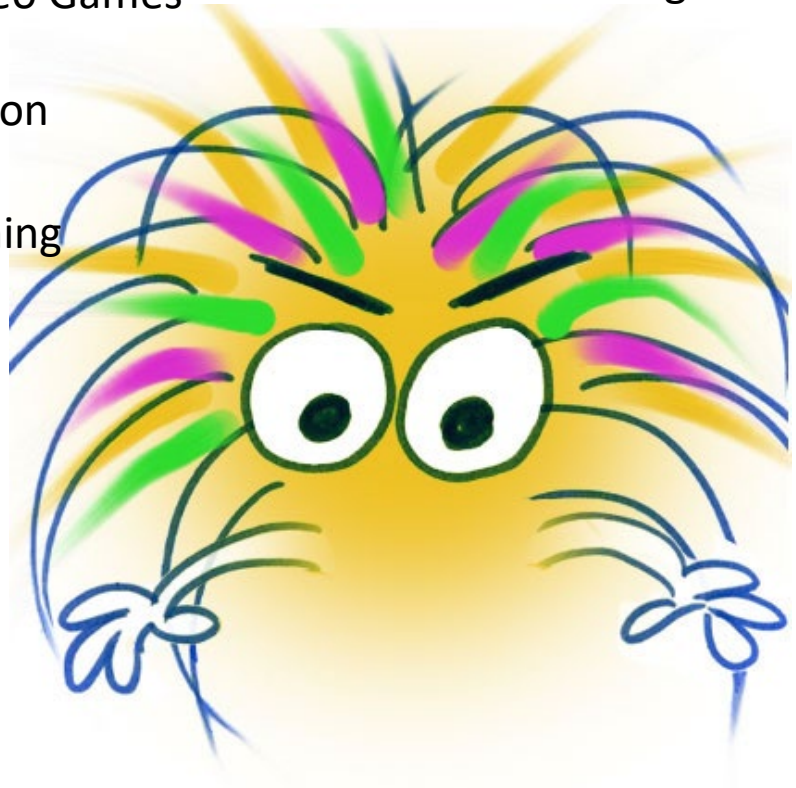
Mental Illness

Too Many/Not Enough Windows

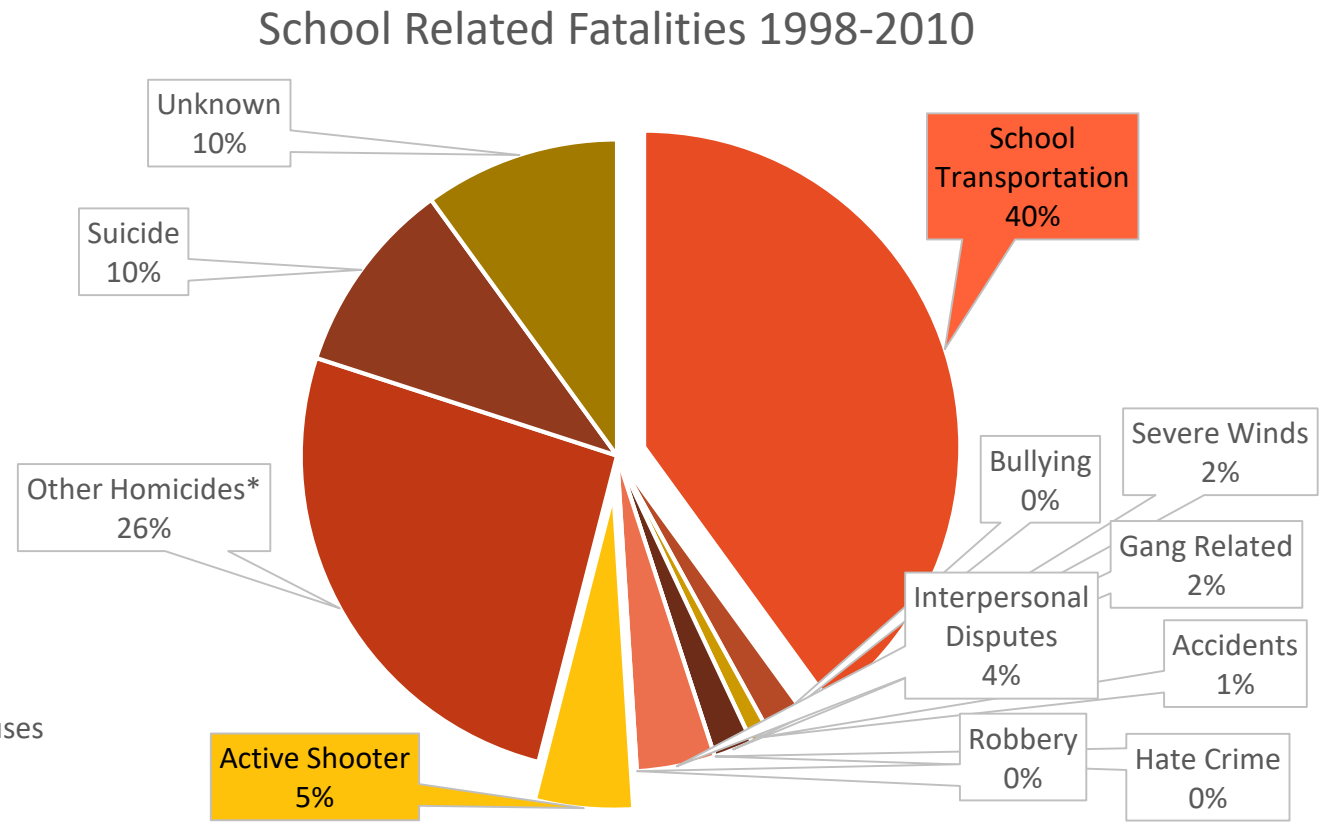
Classes too Big

Guns

"Lone Wolf" Incidents



Perceptions vs Facts



*man-made causes

Satterly, 2014.

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Facts about School Related Fatalities

40%

The highest percentage of student deaths occur in transportation related incidents.

10%

The percentage of deaths caused by suicide.

5%

The percentage of deaths caused by active shooters.

81%

The percentage of firearm homicides which occur in non-school rural settings.

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Facts about School Related Fatalities

Relationship between early childhood trauma and health and well-being problems later in life.

Source: World Health Organization

Greatest Risk to Children

Adverse Childhood Experiences (ACEs)

Active abuse of children as well as neglect or failure to meet basic needs – mental and physical health is impacted and directly correlates to school dropout rates, suicide, and violence.

There is no Easy Answer

There is no more important endeavor than safeguarding the welfare of our children and youth. Creating safe and supportive schools is central to this purpose and must be a national priority. School safety is not achieved with a single program or piece of security equipment. Rather, effective school safety starts with prevention; provides for students' mental health; integrates physical and psychological safety; and engages schools, families, and communities as partners. We know what works, but schools need the resources—financial and human—to implement and sustain the practices that will truly make our children and schools safe from the inside out.

-National Association of School Psychologists

We Need a Variety of Tools

Policy/
Procedures

School Facilities

Preparedness/
Response

Educators,
Students &
Community

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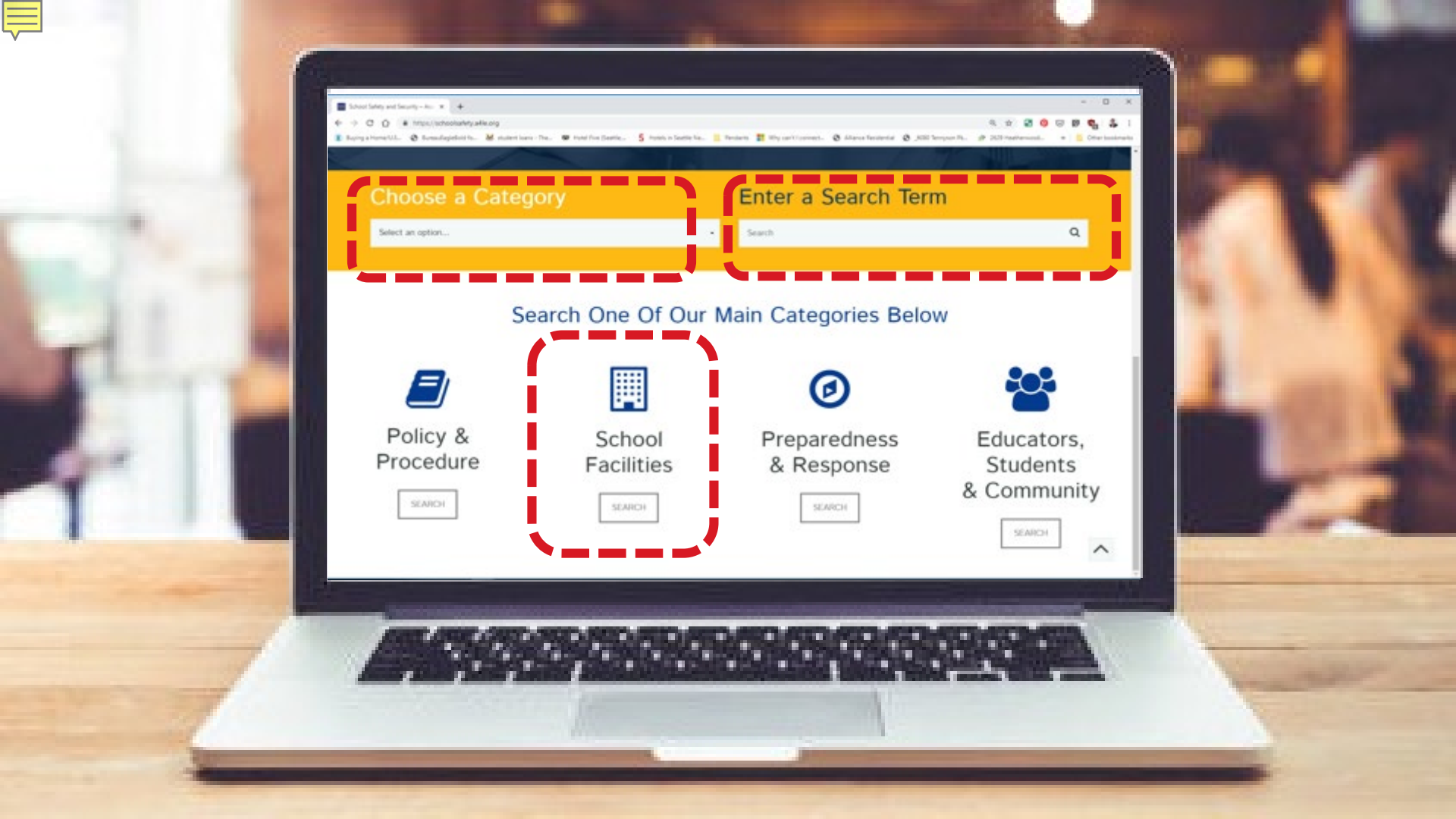
SCHOOL SAFETY & SECURITY
PREPAREDNESS | PLANNING | RESPONSE | RECOVERY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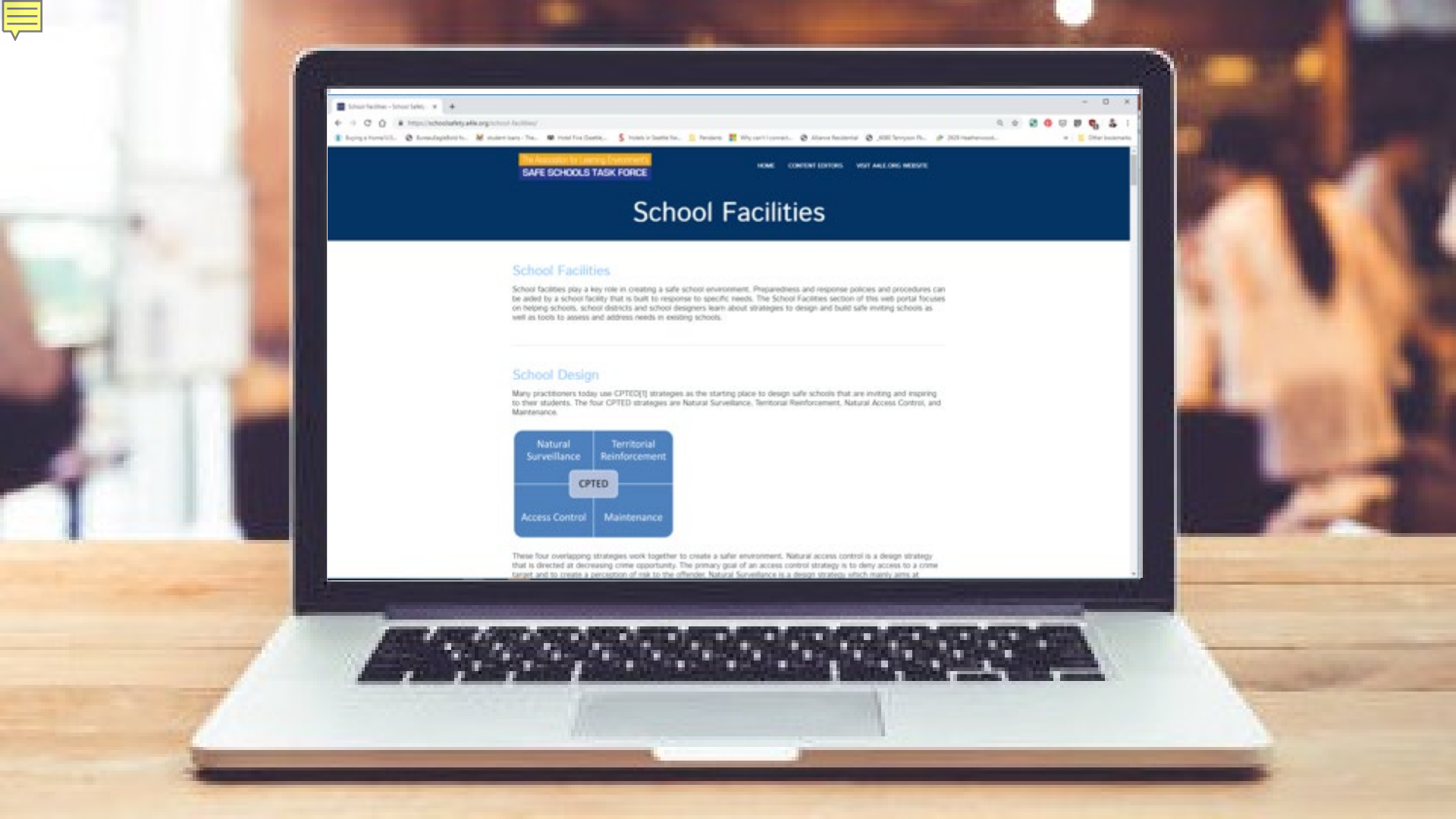
SAFE SCHOOLS TASK FORCE
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School Facilities
School Facilities
School facilities play a key role in creating a safe school environment. Preparedness and response policies and procedures can be aided by a school facility that is built to response to specific needs. The School Facilities section of this web portal focuses on helping schools, school districts and school designers learn about strategies to design and build safe inviting schools as well as tools to assess and address needs in existing schools.
School Design
Many practitioners today use CPTED[1] strategies as the starting place to design safe schools that are inviting and inspiring to their students. The four CPTED strategies are Natural Surveillance, Territorial Reinforcement, Natural Access Control, and Maintenance.
Natural Surveillance
Territorial Reinforcement
CPTED
Access Control
Maintenance
These four overlapping strategies work together to create a safer environment. Natural access control is a design strategy that is directed at decreasing crime opportunity. The primary goal of an access control strategy is to deny access to a crime target and to create a perception of risk to the offender. Natural Surveillance is a design strategy which mainly aims at

			IMPACT OF LOSS		ABILITY			
	a'	a"	b'	b"	c	O	F	
	TO OCCUPANTS	TO FACILITY	TO OCCUPANT	TO FACILITY	TO BOTH	TO OCCUPANT	TO FACILITY	COMBINED
HUMAN:								
Fire	2	2	1	2	2	4	8	12

Table 10: Example of a threat assessment using the Risk Assessment Matrix. This example is examining the threat of fire.

The School Security Dilemma: What Can Be Done?

The problem: A wealth of countermeasure choices; how to choose what's effective?

The assumption:

The cost to secure ***all*** school facilities against ***all*** possible threats exceeds any conceivable amount of capital funding

The Need: A method of prioritizing capital projects:

- How to identify and prioritize threats?
- How to choose effective countermeasures?
- How to prioritize the choices within budget constraints?
- How to fund them?

School Security: Search For A Method

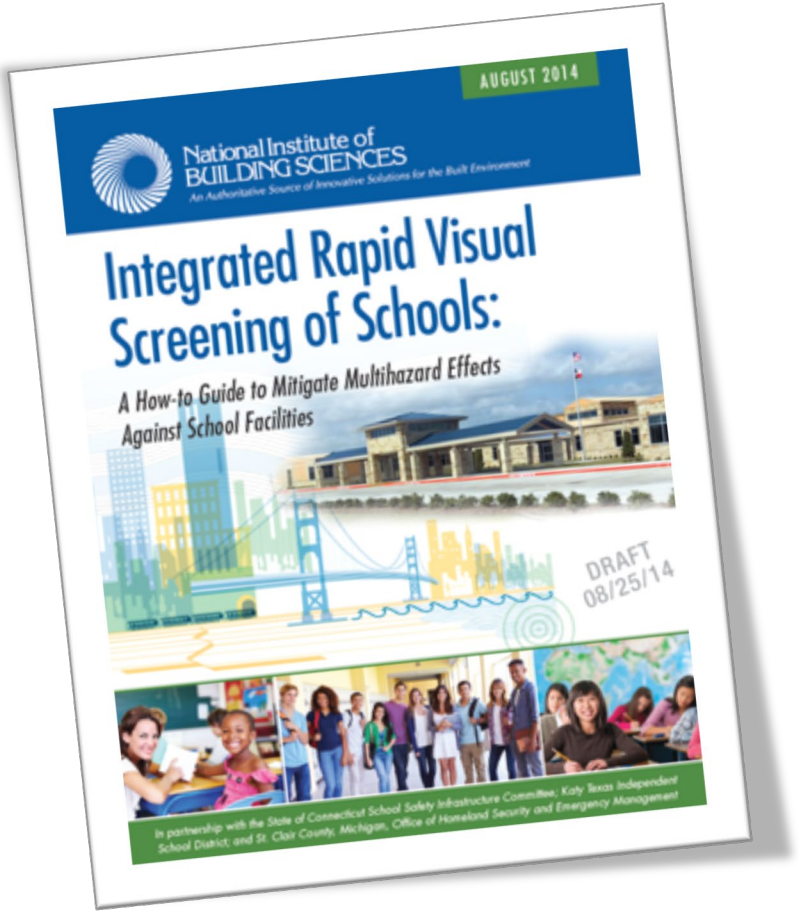
Sources:

- Whole Building Design Guideline (WBDG): *Threat / Vulnerability Assessments and Risk Analysis*, Nancy A. Renfroe, August 8, 2016
- General Services Administration, *The Site Security Design Guide*, June 2007
- FEMA *Primer for Design Safe Schools Projects in Case of Terrorist Attacks* (FEMA 428, 2003)

School Security: Search For A Method

Other Sources:

- Integrated Rapid Visual Screening of Schools: A How-To Guide to Mitigate Multihazard Effects Against School Facilities



School Security: Proposed Threat Assessment Methodology

I. Threat Assessment

1. Identify assets/mission to protect
2. Determine and rate the ***plausible threat scenarios***

II. Vulnerability Assessment

3. Rate ***impact of loss*** and ***vulnerability*** for each threat scenario

III. Risk Assessment

4. Utilize threat, impact of loss, and vulnerability rating to determine ***level of risk***

IV. Countermeasures

5. Identify ***upgrades*** to address identified risks

V. **Re-evaluate** impact of loss and vulnerability based on upgrade recommendations:

6. Repeat upgrade and re-evaluation process until risks are reduced or accepted
7. Proceed with upgrades or develop budgets to implement as soon as funds are available
8. Repeat security risk assessment; start process over

Method follows federal guidance on terrorist attacks (*Interagency Security Committee (ISC) Design Criteria*):

- This threat is not highly likely for schools in U. S. (but note Beslan, Russia September 2004)
- But methodology has validity for other types of threats more common to schools

			IMPACT OF LOSS		ABILITY			
	a'	a"	b'	b"	c	O	F	
	TO OCCUPANTS	TO FACILITY	TO OCCUPANT	TO FACILITY	TO BOTH	TO OCCUPANT	TO FACILITY	COMBINED
HUMAN:								
Fire	2	2	1	2	2	4	8	12

Table 10: Example of a threat assessment using the Risk Assessment Matrix. This example is examining the threat of fire.

School Security: Summary Of Factors

Threat Assessment (likelihood of occurrence)	Almost none	0.5
	Minimal	1
	Potential	2
	Credible	3
	Defined	4
Impact of Loss (at individual facility; not systemwide)	Minor	1
	Noticeable	2
	Severe	3
	Devastating	4
Vulnerability (countermeasures only; attractiveness of target assumed to be equal)	Minor	1
	Typical	2
	Severe	3
	Extreme	4

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School Security: Risk Assessment Matrix

TYPE OF THREAT	THREAT ASSESSMENT		VULNERABILITY ASSESSMENT							RISK ASSESSMENT		
THREAT			IMPACT OF LOSS (at individual facility; not systemwide)						VULNERA-BILITY (existing fclt'y cntrmsrs)			
	a'	a''	b'			b''			c	a' x b' x c	a'' x b'' x c	
	TO OCCUPANTS (direct harm; not indirect loss of resources etc.)	TO FACILITY	To Occupants (student body or individuals)			To Facility				TO OCCUPANTS (direct harm; not indirect loss of resources etc.)	TO FACILITY	COMBINED
			COMPR. SCHL. (ES, MS, HS)	SPEC. ED.	CTE	LIMITED (e.g. classr'm)	PARTIAL (e.g. wing)	TOTAL				
HUMAN:												
Active shooter												
Bullying												
Vandalism												
Burglary/Theft												
Fire												
Arson												
Vehicle attack (bomb)												
NATURAL:												
Tornado												
Hurricane												
Flood												
Earthquake												
Fire												
Landslide												
Snow												
Storm surge/tsunami												
High winds												
Heat wave												
Sea rise												

School Security: Risk Assessment Matrix

TYPE OF THREAT	THREAT ASSESSMENT		VULNERABILITY ASSESSMENT			RISK ASSESSMENT		
THREAT			IMPACT OF LOSS		VULNER ABILITY	a' x b' x c	a" x b" x c	O + F
	a'	a"	b'	b"	c	O	F	
	TO OCCUPANTS	TO FACILITY	TO OCCUPANT	TO FACILITY	TO BOTH	TO OCCUPANT	TO FACILITY	COMBINED
HUMAN:								
Fire	2	2	1	2	2	4	8	12

RISK ASSESSMENT MATRIX: Example

TYPE OF THREAT	THREAT ASSESSMENT		VULNERABILITY ASSESSMENT							RISK ASSESSMENT		
THREAT			IMPACT OF LOSS (at individual facility; not systemwide)						VULNERA-BILITY (existing fclt'y cntrmsrs)			
	a'	a"	b'			b"			c	a' x b' x c	a" x b" x c	
	TO OCCUPANTS (direct harm; not indirect loss of resources etc.)	TO FACILITY	To Occupants (student body or individuals)			To Facility				TO OCCUPANTS (direct harm; not indirect loss of resources etc.)	TO FACILITY	COMBINED
			COMPR. SCHL. (ES, MS, HS)	SPEC. ED.	CTE	LIMITED (e.g. classr'm)	PARTIAL (e.g. wing)	TOTAL				
HUMAN:												
~~Active shooter~~	-	~~0.5~~	-	-	-	~~1~~	-	-	~~3~~	-	~~1.5~~	**~~1.5~~**
Bullying		1				1			3		3	**3**
Vandalism		3				3			2		18	**18**
Burglary/Theft		2				2			2		8	**8**
Fire		1				3			1		3	**3**
Arson		1					3		2		6	**6**
Vehicle attack (bomb)		0.5					4		4		8	**8**
NATURAL:												
Tornado		1					3		4		12	**12**
Hurricane		2						3	2		12	**12**
Flood		1					3		4		12	**12**
Earthquake		0.5						3	2		3	**3**
Fire		1					3		2		6	**6**
Landslide		0.5					4		4		8	**8**
Snow		4						2	1		8	**8**
Storm surge/tsunami		1						3	4		12	**12**
High winds		1						3	4		12	**12**
Heat wave		0.5						1	2		1	**1**
~~Sea rise~~	-	~~0.5~~	-	-	-	-	-	~~3~~	4	-	~~6~~	**~~6~~**

RISK ASSESSMENT MATRIX: Example

TYPE OF THREAT	THREAT ASSESSMENT		VULNERABILITY ASSESSMENT							RISK ASSESSMENT		
THREAT			IMPACT OF LOSS (at individual facility; not systemwide)						VULNERA-BILITY (existing fclt'y cntrmsrs)			
	a'	a"	b'			b"			c	a' x b' x c	a" x b" x c	
	TO OCCUPANTS (direct harm; not indirect loss of resources etc.)	TO FACILITY	To Occupants (student body or individuals)			To Facility				TO OCCUPANTS (direct harm; not indirect loss of resources etc.)	TO FACILITY	COMBINED
			COMPR. SCHL. (ES, MS, HS)	SPEC. ED.	CTE	LIMITED (e.g. classr'm)	PARTIAL (e.g. wing)	TOTAL				
HUMAN:												
~~Active shooter~~	~~0.5~~	~~0.5~~	~~4~~	-	-	~~1~~	-	-	~~3~~	~~6~~	~~1.5~~	**~~7.5~~**
Bullying	3	1	3			1			3	27	3	**30**
Vandalism	1	3	1			3			2	2	18	**20**
Burglary/Theft	3	2	3			2			2	18	8	**26**
Fire	1	1	3			3			1	3	3	**6**
Arson	1	1	1				3		2	2	6	**8**
Vehicle attack (bomb)	0.5	0.5	4				4		4	8	8	**16**
NATURAL:												
Tornado	1	1	3				3		4	12	12	**24**
Hurricane	1	2	3					3	2	6	12	**18**
Flood	1	1	3				3		4	12	12	**24**
Earthquake	0.5	0.5	2					3	2	2	3	**5**
Fire	2	1	3				3		2	12	6	**18**
Landslide	0.5	0.5	3				4		4	6	8	**14**
Snow	2	4	2					2	1	4	8	**12**
Storm surge/tsunami	1	1	2					3	4	8	12	**20**
High winds	1	1	3					3	4	12	12	**24**
Heat wave	3	0.5	3					1	2	18	1	**19**
~~Sea rise~~	~~0.5~~	~~0.5~~	~~1~~	-	-	-	-	~~3~~	4	~~2~~	~~6~~	**~~8~~**

SCHOOL SECURITY: COUNTERMEASURES & CURATIVE MEASURES

TYPE OF THREAT	CURATIVE MEASURES									COUNTERMEASURES																				
THREAT	WELLBEING					MENTAL HEALTH				DETECTION/ MONITORING					PREVENTION				MITIGATION											RESPONSE	
	Natural Light	Learning Spaces for Various Learning Styles	Proper Acoustics	Connection to Nature: Plants, Trees, Etc.	Views to Exterior	Smaller Classroom Communities	Learning on Display/ Engage Inspire Students	Meditation Spaces	Areas for informal learning / socializing	Visibility from within (CPTED)	Camera	Access system	Fire alarm	Early warning	Entry alarm	No blind spots (CPTED)	Limit access	Lock system	Standoff/no burn Perimeter	Evacuation procedure	Lighting	Pod Plan. Areas (wings) can be closed independently	Classroom locks	Area in classroom out of sight	Blinds, shades	Lock-down areas	Fire suppression	Area of refuge	Internal communication	External communication
HUMAN:																														
Active Shooter		√				√		√		√	√	√			√	√	√	√		√		√	√	√	√	√			√	√
Bullying	√	√	√	√	√	√	√	√	√	√	√					√														√
Vandalism	√			√	√	√		√		√	√	√			√	√	√	√			√	√	√							
Burglary/Theft		√			√	√	√			√	√	√			√	√	√	√											√	√
Fire (accidental)													√	√						√							√	√	√	√
Arson										√	√		√	√		√	√	√		√							√	√	√	√
Vehicle attack (bomb)										√	√		√	√					√	√							√		√	√
NATURAL:																														
Tornado														√						√								√	√	√
Hurricane														√						√								√	√	√
Flood														√						√								√	√	√
Earthquake																				√								√	√	√
Fire													√	√					√	√							√	√	√	√
Landslide																				√										√
Snow														√																√
Storm surge/tsunami														√						√										√
High winds														√						√								√		√
Heat wave														√						√								√		√

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Crime Prevention Through Environmental Design (CPTED)

CPTED is based on the theory that the proper design and effective use of the built environment can lead to a reduction in the incidence and ***fear of crime and an improvement in the quality of life.***

-Strategies are site specific

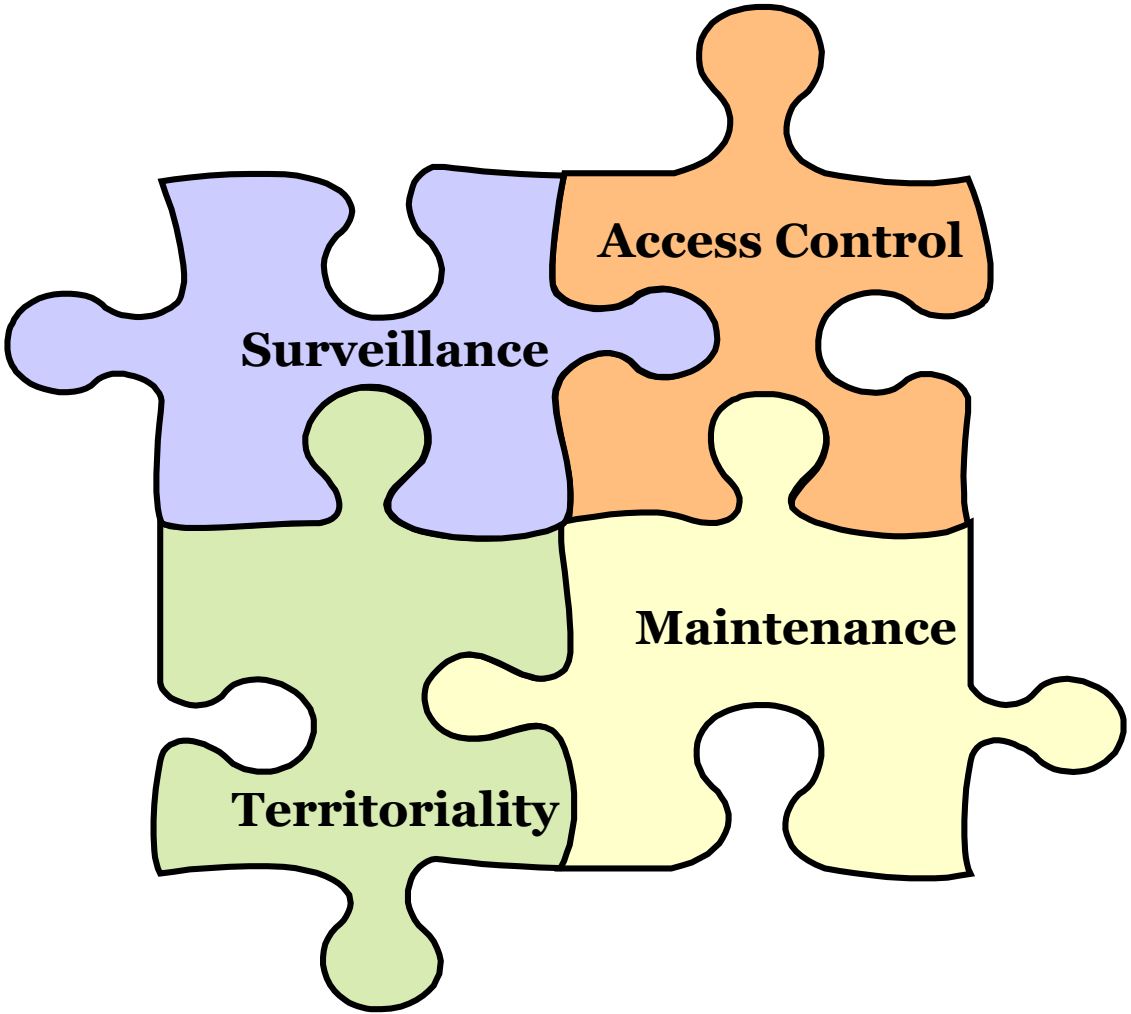
-Can be applied to new and existing projects

-Takes an inter-disciplinary approach to crime prevention

CPTED Theory

- The arrangement and design of buildings and open spaces can **encourage** or **discourage** undesirable behavior and criminal activity.

- It is possible to **reduce** opportunities for **crime** and **disorderly behavior** by changing the physical environment.


Access Control
Surveillance
Maintenance
Territoriality

Natural Surveillance

Natural surveillance is the physical ability to see what's going on in and around your school. Solid walls, tall shrubs, parked cars, outbuildings, sculptures, large signs and other obstacles can block natural surveillance.

Natural Surveillance

Open entry to allow staff to see who is approaching the facility.

Common approaches to increase visibility:

- Installing openings or windows in solid walls to increase visual exposure.
- Replacing solid walls with wrought iron fencing.
- Blocking access to hidden areas entirely.
- Removing any welcoming features, such as benches, that draw people into the hidden area.

Access Control

Natural access control limits the opportunity for crime by taking steps to clearly differentiate between public space and private space. By selectively placing entrances and exits, fencing, lighting and landscape to limit access or control flow, natural access control occurs.

Access Control

Common approaches to increase access control:

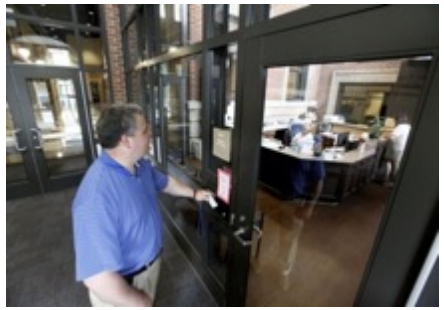
- Re-configuring as many excess entry doors as possible and only serve as emergency exits.
- Replace windows so they can't be used as entry points.
- The fewer the entry points, the less pressure the school is under to try to staff them.

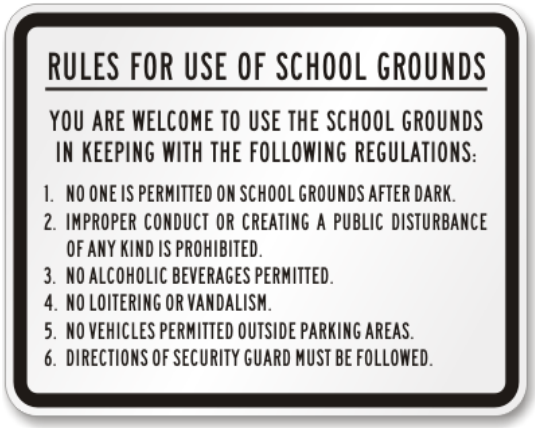
Territoriality

Territorial reinforcement promotes social control through increased definition of space and improved proprietary concern.

Territoriality

Territoriality refers to measures that reinforce a message of ownership over the school.





Examples of Territoriality:

- Signs restricting access or directing visitors to the office.
- Posting campus closing times.
- Define the borders of the campus through open fencing to establish where public space ends and school begins.

Maintenance

Maintenance is an expression of ownership of property. Deterioration indicates less control by the intended users of a site and indicate a greater tolerance of disorder.

Maintenance

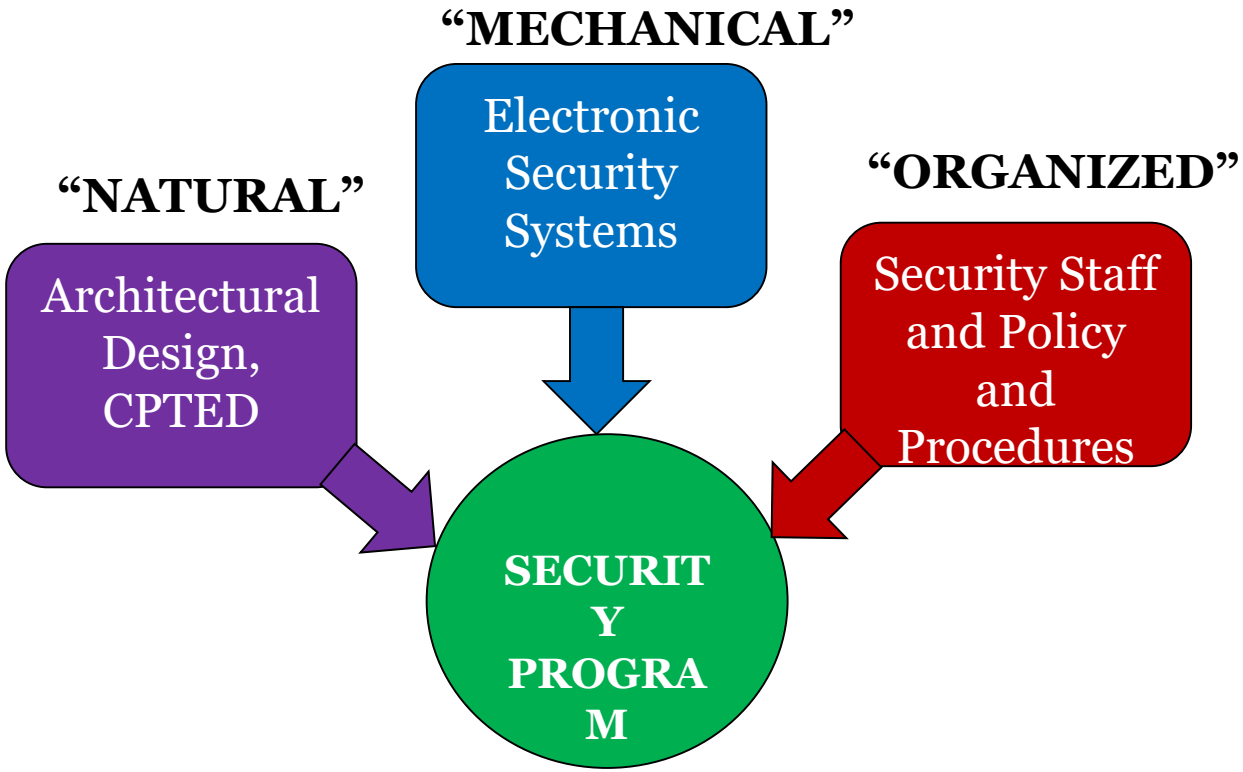
Maintenance further reinforces territoriality. Any unkempt part of the campus sends a message that no one is particularly concerned about or possessive of that part of the school.

Examples of Maintenance:

- Fix broken windows.
- Mow the lawns and trim landscaping.
- Get rid of graffiti.
- Repair deteriorated parts of the building.
- Keep hallways and stairwells free of clutter.

CPTED Conclusion

CPTED principles should be used in conjunction with all the other secu
measures a school employs to create an overall “SECURITY PROGRA
for the school and district.



Counter and Curative Measures

Curative

- Well Being
- Mental Health

Counter

- Detection/Monitoring
- Prevention
- Mitigation
- Response

Curative Measures

Well Being

- Nutrition
- Safety
- Sleep
- Health
- Nat Light
- Outdoors
- Activity

Curative Measures

Mental Health

- Counseling
- Prevention
- Intervention
- Mentoring
- Special Ed

ohio.gov

Counter Measures

- Detection/ Monitoring
- Prevention
- Mitigation
- Response

Policies and Procedures

- School safety is the responsibility of everyone in the community
- Safety design features need to be supported with policies, training and routine monitoring, inspections and maintenance of those policies and procedures

Policies and Procedures

- The Presidential Policy Directive (PPD-8) defines preparedness around five mission areas:
  - Prevention
  - Protection
  - Mitigation
  - Response
  - Recovery

Policies and Procedures

- **Prevention**: The capabilities necessary to avoid, deter, or stop an imminent crime or threatened or actual mass casualty incident. Prevention is the action schools take to prevent a threatened or actual incident from occurring.

- **Protection**: The capabilities to secure schools against violence and manmade or natural disasters. Protection focuses on ongoing actions that protect schools and property from a threat or hazard.

Policies and Procedures

- **Mitigation**: The capabilities necessary to eliminate or reduce the loss of life and property damage by lessening the impact of an emergency.

- **Response**: The capabilities necessary to stabilize an emergency once it is already happened.

- **Recovery**: The capabilities necessary to assist schools affected by an emergency.

POLICIES AND PROCEDURES PLANNING PROCESS

(The following information was developed from guidelines provided by the Readiness and Emergency Management for Schools Center (REMS)


Our Goal: To Help You Create Safe and Inspiring Learning Environments!
SOUTH
NORTH
1
5
6
7

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